APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/034,068	12/27/2001	Thomas P. Fowler	2001-040-NSC	9440

7590 06/24/2004	EXAMINER
Timothy R. Schulte	INOA, MIDYS
Storage Technology Corporation	

ART UNIT	PAPER NUMBER
2188	

One StorageTek Drive, MS-4309
Louisville, CO 80028-4309

DATE MAILED: 06/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _07 June 2004_.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-40_ is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) _1-40_ is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☒ The drawing(s) filed on _27 December 2001_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☐ All   b)☐ Some * c)☐ None of:
      1.☐ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
      application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date _____.
5)☐ Notice of Informal Patent Application (PTO-152)
6)☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1.   The information disclosure statement (IDS) submitted on October 8th, 2003 has

been considered by the examiner.

Claim Rejections - 35 USC § 102

2.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by
> another filed in the United States before the invention by the applicant for patent or (2) a patent granted
> on an application for patent by another filed in the United States before the invention by the applicant
> for patent, except that an international application filed under the treaty defined in section 351(a) shall
> have the effects for purposes of this subsection of an application filed in the United States only if the
> international application designated the United States and was published under Article 21(2) of such
> treaty in the English language.

3.   Claims 1-8, 11-18, 21-28, and 31-40 are rejected under 35 U.S.C. 102(e) as being

anticipated by Feldman et al. (6,516,342).

        Regarding Claims 1, 7-8, 11, 17-18, 21, 27-28, 31-33, 35-38, and 40, Feldman et

al. teaches a system in which a Network Client 14 ("user") extends its memory through

the use of an allocated memory area 22a ("allocated storage space") within a Network

Server 16. The allocated memory area could be composed of one or more hard disk

("plurality of disk storage devices") as it is common for servers or other computer

systems to be equipped with more than one hard drive. Since the memory area 22a is

allocated to the Network Client as needed, the remainder of the memory that is not being

used is free storage space. Given that the communication between the Network Client

and the Network Server is through a network (please see Figure 2) it is understood that

the Network Client is located at a site remote from the Network Server. Feldman et al.

also discloses a memory server manager 20 ("controller"), which administers the use of the server's memory and therefore, must be involved with the allocation of the memory area to the Network Client (Column 4, lines 7-39). Additionally, the system of Feldman et al. allows for Network Clients to extend their memory capability automatically on demand ("automatically transferring a portion of such allocated storage space... in response to user request", Column 4, lines 58-62). Although Feldman et al. discloses suspension of the server's interaction with the client upon the reduction of memory requirements, it is understood that in cases where memory requirements are always high, the interaction between the memory server and the client can be a permanent arrangement.

Even though the system of Feldman discloses the automatic extension of memory capacity on demand, wherein the interaction with the memory server start and end automatically dependent on the memory requirements at the time, manual initiation of user data and programs and user adjustments of programmed application parameters affect the memory requirements of the system and thus manually initiate a request for an increase in allocated storage space.

Regarding Claims 2-3, 12-13, and 22-23, Feldman et al. discloses that the memory server manager 20 ("controller") can be run as a user application (Column 4, line 19). It is understood that for the memory server manager to be "run" such application must be composed of some computer software ("computer program"). Furthermore, in order for the memory server manager to "run" it must also have access to a processor, which can process the software that it is composed of.

Regarding Claims 4, 14, and 24, Feldman et al. also discloses a memory server manager 20 ("controller"), which administers the use of the server's memory and therefore, must be involved with the allocation of the memory area to the Network Client (Column 4, lines 15-19). Since this component allocates the memory that the Network Client needs, the realization that such memory is needed acts as a request from the Network Client ("user") to the memory server manager ("controller").

Regarding Claims 5, 15, and 25, Feldman et al. discloses that the memory server manager 20 ("controller") can be run as a user application (Column 4, line 19). It is understood that for the memory server manager to be "run" such application must be composed of some computer software ("computer program"). Since the memory server manager ("computer program", "controller") is located at the Network Server along with the server memory 22a, composed of a number of hard drives ("plurality of storage devices"), both of these components are to be found at a remote server site.

Regarding Claims 6, 16, 26, 34, and 39, Feldman et al. teaches a virtual memory manager 18 ("storage device manager") within the Network Client which aids in the migration of data to the remote allocated memory 22a and which logs in a memory server translation table the virtual memory address of the client (Column 5, lines 11-30).

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5.   Claims 9-10, 19-20, and 29-30 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Feldman et al. (6,516,343).

Regarding Claims 9, 19, and 29, Feldman et al. teaches a system in which a

Network Client 14 ("user") extends its memory through the use of an allocated memory

area 22a ("allocated storage space") within a Network Server 16. Given that the

communication between the Network Client and the Network Server is through a network

(please see Figure 2) it is understood that the Network Client is located at a site remote

from the Network Server. Feldman et al. also discloses a memory server manager 20

("controller"), which administers the use of the server's memory and therefore, must be

involved with the allocation of the memory area to the Network Client (Column 4, lines

7-39). Feldman et al. does not teach the use of the memory server manager to decrease

the amount of memory space that is allocated to the user. It would have been obvious to

one of ordinary skill in the art at the time the invention was made to give the memory

server manager the ability to decrease the amount of memory being allocated to the

Network Client since such ability would enable the system to allocate memory more

efficiently to other applications when the Network Client does not need all the memory

that is being allocated to it.

Regarding Claims 10, 20, and 30, Feldman et al. also discloses a memory server

manager 20 ("controller"), which administers the use of the server's memory and

therefore, must be involved with the allocation of the memory area to the Network Client

(Column 4, lines 15-19). Since this component allocates the memory that the Network

Client needs, the realization that such memory is needed acts as a request from the

Network Client ("user") to the memory server manager ("controller").

Response to Arguments

6.   Applicant's arguments filed on April 29th, 2004 have been fully considered but they are not persuasive.

Applicant argues that, unlike the claimed invention, the invention of Feldman et al. starts and ends interaction with a memory server for the augmentation of allocated storage space automatically.

Even though the system of Feldman discloses the automatic extension of memory capacity on demand, wherein the interaction with the memory server start and end automatically dependent on the memory requirements at the time, manual initiation of user data and programs and user adjustments of programmed application parameters affect the memory requirements of the system and thus manually initiate a request for an increase in allocated storage space.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Midys Inoa whose telephone number is (703) 305-7850. The examiner can normally be reached on M-F 7:00am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mano Padmanabhan can be reached on (703) 306-2903. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR. Status

information for unpublished applications is available through Private PAIR only. For

more information about the PAIR system, see http://pair-direct.uspto.gov. Should you

have questions on access to the Private PAIR system, contact the Electronic Business

Center (EBC) at 866-217-9197 (toll-free).

Midys Inda
Examiner
Art Unit 2188

MI

**MANO PADMANABHAN
SUPERVISORY PATENT EXAMINER**